SOUHEGAN TECHNICAL REVIEW COMMITTEE
NH Rivers Management and Protection Program
New Hampshire Department of Environmental Services
PO Box 95 - 29 Hazen Drive - Concord, NH 03302-0095
Phone: 603-271-3548 Fax: 603-271-7894
Email: wives@des.state.nh.us

Souhegan TRC Committee Meeting Minutes
Friday, April 1, 2005
1:00 pm – 3:00 pm
Rooms 111 and 112

Members Present:

Representative Richard T. Cooney
Dr. Kenneth D. Kimball, Chair
Vernon B. Lang
James MacCartney
Dr. Brian R. Mrazik
Carl Paulsen
Thomas Roy, Vice Chair
Donald L. Ware

Members Absent:

Ralph W. Abele
Douglas Bechtel
Alden Greenwood
William C. Ingham
John R. Nelson

Others Present:

Representative Chris Christensen	
F. Vincent Gerbino	Monadnock Mountain Spring Water
Doug Skene	Pilgrim Food
Alex Levy	Gomez and Sullivan
John Magee	NH Fish and Game
Spencer Brookes	Souhegan LAC
Tom Neforas	Town of Milford
Jamie Warner	Amherst Country Club
Robert Johnson, II	NH Farm Bureau
Allan Palmer	PSNH
Brian Gallagher	NHWWA
Peter DeBrusk	Tuckahoe Turf Farm
Barbara Woodward	Burton Pond
J. Griffith	Burton Pond
Tom Ballestero	UNH
Don Kretchmer	Normandeau Associates
Tom Seager	UNH

DES Staff Present:

Rick Chormann, NHDES
Wayne Ives, Instream Flow Coordinator
Marie Loskamp, Executive Secretary, Watershed Management Bureau

1:00 – 1:15 Acceptance of January 24, 2005 minutes

Chair Ken Kimball opened the meeting and requested a motion to accept the minutes of the January 7th meeting.

- **Tom Roy made a motion to accept the minutes of the of the January 7th meeting as presented. Tom Ware seconded the motion and the vote was unanimous.**

1:15 – 1:45 <u>UNH Presentation and Questions Results From Task 2</u> by: Tom Ballestero, Tom Seager and Don Kretchmer. The power point presentation is on the DES web site and the UNH web site.

Task 2 results – Souhegan AWU groundwater withdrawal impacts on stream flow.
Gave insight to CUT curves and a sense of how they would be moving forward in a useable form.

Talked about flow management - if you had a direct surface water withdrawal, and flow was low you could shut AWUs off. In general groundwater surface is sloping toward the river when there is no pumping from the well. Once a well starts pumping, a depression forms around the well low enough that water that was going to the river now goes back to the well. Equation for determining stagnation point, the water flows both ways from the stagnation point. Reduce the well discharge to move the stagnation point away from the river.

Twelve affected wells are listed—in reality there are about 20 wells. Several wells are on the same permit. We took GPS readings at the wells to find the distance to the river. We can survey to get more exact reading once the snow is gone. UNH would like to visit with each and every well owner. Have talked to some but not all of them as some want to remain anonymous.

If ISF can be aided by reduction in groundwater pumping, how long does it take for the induced recharge? In one example the captured reduced recharge is captured in one day. We will put piezometers in stream bed. They are very small, only go down 3 feet into the bed. If we have AWUs reduce pumping for 3 days for 3 wells we will see recharge in the river. We have to do this when the river is low. When river is high the water goes back into the aquifers.

<u>Question</u> - Is there a possibility that if an AWU pumped 24 hours a day, they could exceed the calculated value for induced recharge?
Answer – UNH passed out surveys, and monthly or quarterly water used data is reported as monthly, but they could have used the monthly total water all in one day. The ones that are very close especially need to be looked at. These are the ones that we need to be concerned about. An AWU might be pumping 35 gallons per day but the maximum is 50 gals. per day and is this something that will help us out when we need it.

<u>Question</u> – How much flow intercepted by the well would go to the river?
Answer - If no induced recharge then all groundwater would be intercepted. However, water that is going towards the river, may not go to the river. Whether it reaches the river is another question. It may flow parallel with the river in the aquifer.

Travel time - the induced water from the river you recapture very fast. If you are far from the river, the other side is the return flow, steady state, what happens between the take out and the return that is the area we are concerned about.

1:45 – 2:45 <u>UNH Presentation and questions</u> - Discussion of generic PISF results and WMP with emphasis on public comprehension and NHDES implementation

Don discussed what the WMP is going to look like and where they are in the process. Obtaining data from all of the affected water users, talked to a lot of waters users and dam owners, Tom focusing on what are acceptable and not acceptable alternatives.

Currently we are in the preliminary stages of developing the WMP. Numbers in this discussion are fictional. Flow-dependent resources were presented at last meeting. How do we get from PISF to WMP? Some IPUOCRs are dependent on low flows and some are dependent on high flows. Most depend on the low end of the hydrograph. Looking at all species of fish and all life stages.

Conflicts will come out in the WMP--what they are and what needs to be done. Multi criteria decision management will be used to resolve. Dams have a mix of types on the river and types of affected water users. Most large withdrawals are in the lower section of river, some return flow to river, some groundwater withdrawals return as surface discharges. Not many water withdrawals above Wilton, most withdrawals are below Wilton.

Conservation management with AWUs - Some users have conserved a fair amount of water already. They now use conservation and are they planning to use more. What have they tried that hasn't worked? Talk more with them on bottlenecks on water conservation strategies. Potential conservation measures, leak detection, stockpiling, recycling, reuse, adding wetting agents, BMPs, low flow devices, sprinklers, showers, toilets, education.

Water use plan – AWUs water use data, potential modifications, effects of PISF on other uses, overall water use plan, implantation schedule, and economic assessments. Potential water use measures: time sharing of water, watering restrictions, system wide or specific use restrictions, use of storage release from storage on designated reach or upstream, process modification or process slowdown or shutdown.

Dam management plan – Individual ADO information and specs, potential for low flow, august regulation (relative reservoir size) downstream ecologic restrictions, operation strategies to meet PISF implementation schedule, economic assessment. Potential short term dam measures - coordination of multiple dams, run of the river operation, release from storage, spill/generation scheduling shift. Correlation doesn't happen automatically.

People that Don Kretchmer has interviewed are telling him what they feel the WMP should be. People are telling him what is important to them and Don feels that the TRC may be surprised at what the community is saying are important to them.

Tom Seager – MCDA - Using what people have been telling him. Job has been all about listening. Talk to affected water users, what are their concerns, work three questions into every interview, I have to ask questions in different ways. What is important about the river to you, how do you know when you are getting what is important and who else do I need to talk to. Just background, not recording, just notes of two or three sentences, paraphrase what the answer is to the first question what is important about the river to you. The response to these value statements: no one saying it needs to be in pristine condition. Protection for human use: the other thing I am getting is that people understand their position in a greater community. So far everyone understands that what they do impacts their neighbors and vice versa. WMP has to have a couple of results:, flexibility, change and be responsive to changes in the community, people are ready to say they will make change provided they know there will be benefits for the whole community that they can see.

A lot of work has already been done, they have accepted that the river is on the agenda, but don't know what the changes might be. If you can show them the stagnation point results, now it means something. People are measuring streamflow by looking at the banks and the river. The way they think about it is how the river is important to them. It is useful to tie the models and specs back to what people observe with their own eyes and senses.

If the WMP were perfect it would do all these things: protect ecological health of river; meet human needs for drinking water and fire flows; meet needs of industry and agriculture especially in times of drought; prove share cultural and education experience for riparian community; provide tangible and credible benefits to community; maintain regulatory flexibility; and provide flood damage protection.

We will give a sheet to everyone we talked to and have them rank these. Some people will have to compromise and someone has to make the decisions because the resource cannot be shared to everyone's satisfaction all the time.

We will provide recommendations to Wayne and DES on how to manage the plan once it is done. We have talked to affected water and dam users, talked to conservation commission (Souhegan Local Advisory Committee) and people in agriculture and industry.

Ken Kimball – The Souhegan is one of two pilots for the state, relative complex process to get to the final plan, and conditions will change, which requires WMP to be flexible. What is the model that is to be left behind to implement and adapt as conditions change?

Tom Seager - Design a process that is transferable to other rivers, five years later how do you, and I don't think that we have that one sufficiently worked out. There is going to be more thought concerning how you update it. In February we sent letters to selectmen boards and planning boards asking if there are any proposals for large water uses, long term product of this study is good handling of which reaches are most sensitive, anything upstream sensitive to withdrawals and returns that go further down stream, planning boards looking at weighting projects in these locations. Values can change in the future as to what is important, what DES could do is continue these types of public values to see if there is a shift in values over time. Most of the western paradigm was water for irrigation and now irrigation is not important anymore. You have to do some of this process in the future.

Stormwater runoff increases as you create development and then it is down in the Atlantic Ocean when you need it. If you manage these things and don't let development go on without controlling it, and keep planning proper response. If you think of stormwater and wells which are out 500 feet, the communities themselves are doing something about it. If those devices are implemented and made at the community level, the UNH stormwater center does put on individual demonstrations for stormwater management.

Ken Kimball - Search for money to carry out what you are doing is not an easy task and not any easier in the future. There is a structural problem with the instream flow rules as written.

Tom Ballestero - First had discussions that have recognized flow-based WMP; we are also making recommendations where non-flow based measures can be employed. Individual entity could spend money in a factory, but it may be more effective to implement management more toward dealing with impervious area. Where do the rules go? Leave that to Wayne. Flexibility in current rules to make them, little wiggle room to make changes there. Next step is PISF recommendations that need to be met.

Ken Kimball - Take home message, try to mimic the natural hydrograph and look at biology in the streams to help. How do you apply this to the user? Relative to the user and the state employing it, this is not practical.

Tom Ballestero– Seasonally you could have something tied to a gage. A gage is used and there is no problem in the lst stage, but we need some type of an advisory level at the gage, certain stretches have a problem, if persist and flow gets lower, then you put out a watch. "We are at this stage and if we fall lower, these are measures we may need to take." You would pick up the phone and try to implement at that time and at the last stage you would have to implement.

Hope that interest in watershed is high, have a lot of eyes and ears on the ground with symbiosis between the state and people out in the public to make this work.

Hope that down the road – someone would come out and say that we have the community that we are managing, confirm what we are doing is the desired IPUOC that we started out with.

When you are working with multiple water users it is more complex. Once we come up with blueprint this group is talented enough to work out the solution.

- **Ken Kimball – Next Meeting Target Fish Communities. Wayne had put this item off at this meeting so we could focus on these two agenda items.**

Wayne stated that at the next meeting we will have the results of the target fish community and the identification and use in PISF assessment. I would propose to have UNH present at another meeting as they will have other information to present as well. Target fish community is a component of the model and added to the process. There are a number of agencies that are fishery related Fish and Game, EPA, Massachusetts Fish and Wildlife that we have involved to put that process through its review. We will have a chance to look at it before we decide

By the middle of next week Wayne will have the presentation on the DES web site. UNH keeps a site and our sites are linked.

By the time the committee meets again we will have the PISF assessments and then be ready to move into public hearing. June or July we can talk about instream flow as all of the field work will have been completed by then and reference fish and streams will be behind us.

Ken will work with Wayne to pick the best date and time for the next meeting.

Motion was made and seconded to adjourn meeting and the vote was unanimous.

Meeting adjourned at 2:57 pm.